



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| | | | | |
|--|---------------|----------------------|---------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/572,798 | 03/22/2006 | Kazuhisa Adachi | ADAC3006/GAL | 4921 |
| 23364 | 7590 | 02/12/2008 | EXAMINER | |
| BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314 | | | NGUYEN, CHAUN | |
| ART UNIT | PAPER NUMBER | | | |
| | 2831 | | | |
| MAIL DATE | DELIVERY MODE | | | |
| 02/12/2008 | PAPER | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|--------------------------------------|--------------------------------------|
| Office Action Summary | Application No. 10/572,798 | Applicant(s) ADACHI ET AL. |
| | Examiner Chau N. Nguyen | Art Unit 2831 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,2 and 4-18 is/are pending in the application.
 - 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) Claim(s) ____ is/are allowed.
- 6) Claim(s) 1,2 and 4-18 is/are rejected.
- 7) Claim(s) ____ is/are objected to.
- 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 22 March 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1668)
 Paper No(s)/Mail Date 3/22&6/27/06.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Drawings

1. Figures 2 and 8-10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4 and 10 are considered vague and indefinite. Each claim calls for "an annular metal fitting disposed concentrically with the conductor bar at a position lower than the insulation sleeve, wherein the polymer clad body is disposed at a position higher than **the metal fitting**, wherein the receiving port is provided at a position lower than **the metal fitting**, and wherein the electric-field stress-control layer is in contact with **the annular metal fitting**". It appears that only one metal fitting is recited in claim 4. As disclosed and shown in the drawings, there are four metal fittings 4, 8, 14, and 19. Metal fittings 8, 14 and 19 are all disposed concentrically with the conductor bar at a position lower than the insulation sleeve, but the electric-field stress-control layer is NOT in contact with any of those fittings and the receiving port is NOT provided at a position lower than any of those fittings. The receiving port is provided at a position lower than the metal fitting 4, and the electric-field stress-control layer is in contact with the metal fitting 4. However, the metal fitting 4 is NOT disposed at a position lower than the insulation sleeve.

Claims 5-9 and 11-18 are included in this rejection because of dependency.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Johansson (6,074,229).

Johansson discloses a polymer bushing comprising: a hard insulation sleeve (8) surrounding a central conductor bar and having a receiving port for a cable terminal at a lower end thereof, an electrical-field stress-control layer (13) surrounding the insulation sleeve, and a polymer clad body (15) which is disposed around an outer periphery of the stress-control layer and having a plurality of longitudinally spaced shades on its outer periphery. Johansson also discloses the receiving port being provided at a position lower than the polymer clad body.

6. Claims 4-7 and 9-13, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Varreng (5,206,780).

Varreng discloses a polymer bushing comprising: a hard insulation sleeve (7, 17) surrounding a central conductor bar (4) and having a receiving port for a cable

terminal at a lower end thereof, an electrical-field stress-control layer (19, 32) surrounding the insulation sleeve, a polymer clad body (15, 33) which is disposed around an outer periphery of the stress-control layer and having a plurality of longitudinally spaced shades on its outer periphery, and wherein an annular metal fitting (2, 20, 21) disposed concentrically with the conductor bar at a position lower than the insulation sleeve, wherein the polymer clad body is disposed at a position higher than the metal fitting, wherein the receiving port is provided at a position lower than the metal fitting, and wherein the electric-field stress-control layer is in contact with the annular metal fitting (re claims 4 and 10). Varreng also discloses that the metal fitting is for electric-field mitigation and is embedded and fixed at the position lower than the insulation sleeve (re claims 5 and 11), the stress-control layer is a zinc oxide layer (re claims 6 and 12), the insulation sleeve is disposed integrally with an outer periphery of the conductor bar (re claims 7 and 13), and a cable terminal is mounted in the receiving port of the polymer bushing (re claim 9).

7. Claims 4 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Quaggia (2002/0056564).

Quaggia discloses a polymer bushing comprising: a hard insulation sleeve (11) surrounding a central conductor bar (8) and having a receiving port (a lower open end of the sleeve) for a cable terminal at a lower end thereof, an electrical-field stress-control layer (12) surrounding the insulation sleeve, a polymer clad body (14) which is disposed around an outer periphery of the stress-control layer and having a plurality of longitudinally spaced shades on its outer periphery, and wherein an annular metal fitting (21a, 21b) disposed concentrically with the conductor bar at a position lower than the insulation sleeve, a high tension connection at a lower end of the insulation sleeve, and wherein the polymer clad body is disposed at a position higher than the metal fitting, and wherein the electric-field stress-control layer is in contact with the annular metal fitting.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the

subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 8, 14, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quaggia in view of Tachick (3,595,984).

Claims 8, 14, 15 and 17 additionally recite that the polymer bushing is bent at a position intermediate its ends at 90 degrees. Tachick (Figure 1) discloses a polymer bushing which is bent at a position intermediate its ends at 90 degrees. It would have been obvious to one skilled in the art to bend the polymer bushing of Quaggia at 90 degrees to connect components at different positions as taught by Tachick.

11. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quaggia in view of Tachick as applied to claims 8 and 14 above, and further in view of Gerry (4,398,125).

Claims 16 and 18 additionally recite the polymer bushing bent at 100-150°. Gerry discloses a polymer bushing having a bent at a position intermediate its ends and at 100-150°. It would have been obvious that depending on the specific use of the polymer bushing, one skilled in the art would bend the bushing of Quaggia at 100-150° as taught by Gerry to connect components at different positions.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutiérrez can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chau N Nguyen/

Chau N Nguyen
Primary Examiner
Art Unit 2831